# WEST Search History

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DATE: Wednesday, February 16, 2005

| Hide? | Set Name | Query | Hit Count |
|---|---|---|---|
| | | *DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ* | |
| ☐ | L11 | L1 and L10 | 6 |
| ☐ | L10 | (xanthan gum or hydroxypropyl methylcelluose and rectal administration) | 20927 |
| ☐ | L9 | (polysaccharide and rectal administration) | 1447 |
| ☐ | L8 | (rectal administration) | 18026 |
| ☐ | L7 | (xanthan gum or hydroxypropyl methylcelluose and enema) | 20904 |
| ☐ | L6 | (xanthan gum or hydroxypropyl methylcelluose and enema) | 20904 |
| ☐ | L5 | (enema) | 7903 |
| ☐ | L4 | (xanthan gum or hydroxypropyl methylcelluose) | 20950 |
| ☐ | L3 | (liquid enema and polysaccharide) | 2 |
| ☐ | L2 | (polysaccharide) | 83011 |
| | | *DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ* | |
| ☐ | L1 | (liquid enema) | 36 |

END OF SEARCH HISTORY

h e b b cg b chh e f e ge ge

(FILE 'HOME' ENTERED AT 15:44:46 ON 16 FEB 2005)

FILE 'MEDLINE, KOSMET, HCAPLUS' ENTERED AT 15:45:04 ON 16 FEB 2005

| | | | |
|---|---|---|---|
| L1 | 8 | S | LIQUID ENEMA |
| L2 | 2245 | S | RECTAL ADMINISTRATION |
| L3 | 140 | S | RECTAL DELIVERY |
| L4 | 2335 | S | L2 OR L3 |
| L5 | 72410 | S | POLYSACCHARIDE |
| L6 | 9 | S | L5 AND L4 |
| L7 | 0 | S | L5 AND L1 |
| L8 | 9 | S | (L1 OR L4) AND L5 |
| L9 | 14 | S | (L1 OR L4) AND XANTHAN GUM |
| L10 | 0 | S | (L1 OR L4) AND HYDROXYPROPYLMETHYLCELLULOSE |
| L11 | 4 | S | (L1 OR L4) AND HYDROXYPROPYL METHYLCELLULOSE |

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 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
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 NEWS  3  SEP 01   New pricing for the Save Answers for SciFinder Wizard within
                   STN Express with Discover!
 NEWS  4  OCT 28   KOREAPAT now available on STN
 NEWS  5  NOV 30   PHAR reloaded with additional data
 NEWS  6  DEC 01   LISA now available on STN
 NEWS  7  DEC 09   12 databases to be removed from STN on December 31, 2004
 NEWS  8  DEC 15   MEDLINE update schedule for December 2004
 NEWS  9  DEC 17   ELCOM reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  10 DEC 17   COMPUAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  11 DEC 17   SOLIDSTATE reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  12 DEC 17   CERAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  13 DEC 17   THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
 NEWS  14 DEC 30   EPFULL: New patent full text database to be available on STN
 NEWS  15 DEC 30   CAPLUS - PATENT COVERAGE EXPANDED
 NEWS  16 JAN 03   No connect-hour charges in EPFULL during January and
                   February 2005
 NEWS  17 JAN 26   CA/CAPLUS - Expanded patent coverage to include the Russian
                   Agency for Patents and Trademarks (ROSPATENT)
 NEWS  18 FEB 10   STN Patent Forums to be held in March 2005
 NEWS  19 FEB 16   STN User Update to be held in conjunction with the 229th ACS
                   National Meeting on March 13, 2005

 NEWS EXPRESS  JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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FILE 'HOME' ENTERED AT 15:44:46 ON 16 FEB 2005

=> file medline kosmet hcaplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'MEDLINE' ENTERED AT 15:45:04 ON 16 FEB 2005

FILE 'KOSMET' ENTERED AT 15:45:04 ON 16 FEB 2005
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FILE 'HCAPLUS' ENTERED AT 15:45:04 ON 16 FEB 2005


=> s liquid enema
L1 8 LIQUID ENEMA

=> s rectal administration
L2 2245 RECTAL ADMINISTRATION

=> s rectal delivery
L3 140 RECTAL DELIVERY

=> s L2 or L3
L4 2335 L2 OR L3

=> s polysaccharide
L5 72410 POLYSACCHARIDE

=> s L5 and L4
L6 9 L5 AND L4

=> d L6 1-9 ibib abs

L6 ANSWER 1 OF 9 MEDLINE on STN
ACCESSION NUMBER: 1999019829 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9801431
TITLE: Thermally reversible xyloglucan gels as vehicles for rectal drug delivery.
AUTHOR: Miyazaki S; Suisha F; Kawasaki N; Shirakawa M; Yamatoya K; Attwood D
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Health Science University of Hokkaido, Ishikari-Tohbetsu, Hokkaido 061-02, Japan.
SOURCE: Journal of controlled release : official journal of the Controlled Release Society, (1998 Dec 4) 56 (1-3) 75-83. Journal code: 8607908. ISSN: 0168-3659.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199901
ENTRY DATE: Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19990105

AB The aim of this study was to investigate the potential application of thermoreversible gels formed by a xyloglucan **polysaccharide** derived from tamarind seed for rectal drug delivery. Xyloglucan that had been partially degraded by beta-galactosidase to eliminate 44% of galactose residues formed gels at concentrations of between 1 to 2% w/w at gelation temperatures decreasing over the range 27 to 22 degreesC with increasing concentration. The in vitro release of indomethacin and diltiazem from the enzyme-degraded xyloglucan gels followed root-time kinetics over a period of 5 h at 37 degreesC; the diffusion coefficients increasing with temperature increase between 10 and 37 degreesC. The in vitro release of indomethacin from the gels was significantly more sustained than from commercial suppositories. Measurement of plasma levels of indomethacin after **rectal administration** to rabbits of the gels and commercial suppositories containing an identical drug concentration indicated a broader absorption peak following administration of the gels, and a longer residence time. There was no significant difference in bioavailability of indomethacin when administered by these two vehicles. Morphological studies of rectal

mucosa following a single administration of the gels showed no evidence of tissue damage. The results of this study suggest the potential of the enzyme-degraded xyloglucan gels as vehicles for **rectal delivery** of drugs.

L6 ANSWER 2 OF 9 MEDLINE on STN
ACCESSION NUMBER: 95230506 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7714736
TITLE: Modification of rectal absorption of morphine from hollow-type suppositories with a combination of alpha-cyclodextrin and viscosity-enhancing **polysaccharide**.
AUTHOR: Uekama K; Kondo T; Nakamura K; Irie T; Arakawa K; Shibuya M; Tanaka J
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Kumamoto University, Japan.
SOURCE: Journal of pharmaceutical sciences, (1995 Jan) 84 (1) 15-20.
Journal code: 2985195R. ISSN: 0022-3549.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199505
ENTRY DATE: Entered STN: 19950524
Last Updated on STN: 19950524
Entered Medline: 19950518

AB An attempt was made to optimize the **rectal delivery** of morphine, using cyclodextrins as an absorption enhancer and polysaccharides as a swelling hydrogel in Witepsol H-15 hollow-type suppositories, and this was tested in rabbits. alpha- and beta-cyclodextrins enhanced the rate and extent of bioavailability, the former being more effective; gamma-cyclodextrin decreased the absorption of morphine. The in-vitro membrane permeation studies using excised rectal sacs revealed that alpha-cyclodextrin enhanced the permeation of morphine through the rectal membranes. In contrast, viscous polysaccharides such as xanthan gum retarded the plasma morphine levels after the **rectal administration**, reflecting in-vitro slow release characteristics. A combination of alpha-cyclodextrin and xanthan gum produced sustained plasma profiles of morphine along with an increased rectal bioavailability (more than 4 times). From the observation of the distribution behavior of suppositories in rabbit rectum and colon after the **rectal administration**, xanthan gum was found to prevent the upward spread of the drug. Gross and microscopic observations suggested that this preparation was less irritating to the rectal mucosa.

L6 ANSWER 3 OF 9 MEDLINE on STN
ACCESSION NUMBER: 64081527 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14123778
TITLE: [CHANGES IN FIBRINOLYSIS CAUSED BY PROLONGED INTRAVENOUS AND **RECTAL ADMINISTRATION** OF AN ACID **POLYSACCHARIDE**].
MODIFICAZIONI DELLA FIBRINOLISI DA SOMMINISTRAZIONE PROLUNGATA DI UN POLISACCARIDE ACIDO PER VIA ENDOVENOSA E RETTALE.
AUTHOR: GIBELLI A; DELUTTEROTTI A; FRANDOLI G
SOURCE: Giornale di gerontologia, (1963 Dec) 11 1319-24.
Journal code: 0375343. ISSN: 0017-0305.
PUB. COUNTRY: Italy
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Italian
FILE SEGMENT: OLDMEDLINE
ENTRY MONTH: 199612

ENTRY DATE: Entered STN: 19990716
Last Updated on STN: 19990716
Entered Medline: 19961201

L6 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:314493 HCAPLUS
DOCUMENT NUMBER: 132:318039
TITLE: Methods and compositions for the prevention of tolerance to medications
INVENTOR(S): Ahmed, Tahir
PATENT ASSIGNEE(S): Baker Norton Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2000025723 | A2 | 20000511 | WO 1999-US24034 | 19991013 |
| WO 2000025723 | A3 | 20000727 | | |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 6235725 | B1 | 20010522 | US 1999-362540 | 19990728 |
| CA 2348926 | AA | 20000511 | CA 1999-2348926 | 19991013 |
| AU 2000012051 | A5 | 20000522 | AU 2000-12051 | 19991013 |
| AU 760119 | B2 | 20030508 | | |
| EP 1124563 | A2 | 20010822 | EP 1999-971300 | 19991013 |
| EP 1124563 | B1 | 20040929 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| BR 9915818 | A | 20020618 | BR 1999-15818 | 19991013 |
| JP 2002535245 | T2 | 20021022 | JP 2000-579168 | 19991013 |
| RU 2226103 | C2 | 20040327 | RU 2001-114522 | 19991013 |
| NZ 511399 | A | 20040924 | NZ 1999-511399 | 19991013 |
| EP 1462148 | A2 | 20040929 | EP 2004-14471 | 19991013 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| AT 277621 | E | 20041015 | AT 1999-971300 | 19991013 |
| TW 565451 | B | 20031211 | TW 1999-88118719 | 19991109 |
| ZA 2001003375 | A | 20030206 | ZA 2001-3375 | 20010425 |
| NO 2001002097 | A | 20010615 | NO 2001-2097 | 20010427 |

PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| US 1998-106507P | P | 19981030 |
| US 1999-362540 | A | 19990728 |
| EP 1999-971300 | A3 | 19991013 |
| WO 1999-US24034 | W | 19991013 |

AB The present invention pertains to the identification of moieties and methods of using the same for preventing tolerance to bronchodilators. More specifically, the present invention pertains to the identification of compns. and methods which are capable of preventing tolerance to β2-adrenergic agonists. The methods and compns. according to the invention are also useful as anal. tools for functional studies and as combination therapeutic tools. The method comprises the administration of therapeutically effective amts. of the bronchodilator and of an effector. The effector includes polysaccharides, preferably a low-mol. weight heparin and ultra-low mol. weight heparin.

L6 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:233808 HCAPLUS
DOCUMENT NUMBER: 130:272024
TITLE: Pharmaceutical composition for the treatment of inflammatory bowel diseases
INVENTOR(S): Sachetto, Jean-Pierre; Sandborn, William Jeffery; Tremaine, William John
PATENT ASSIGNEE(S): Medeva Europe Limited, UK
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9916454 | A1 | 19990408 | WO 1998-GB2899 | 19980925 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2304948 | AA | 19990408 | CA 1998-2304948 | 19980925 |
| AU 9891780 | A1 | 19990423 | AU 1998-91780 | 19980925 |
| AU 758501 | B2 | 20030320 | | |
| EP 1017404 | A1 | 20000712 | EP 1998-944115 | 19980925 |
| EP 1017404 | B1 | 20040623 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI | | | | |
| JP 2001517708 | T2 | 20011009 | JP 2000-513588 | 19980925 |
| AT 269710 | E | 20040715 | AT 1998-944115 | 19980925 |

PRIORITY APPLN. INFO.: GB 1997-20590 A 19970926
GB 1997-25346 A 19971128
WO 1998-GB2899 W 19980925

AB A **polysaccharide** selected from xanthan gum and HPMC is used for the treatment or prophylaxis of inflammatory bowel disease, especially Crohn's disease, left-sided ulcerative colitis or pouchitis. The **polysaccharide** is delivered by enteric-coated dosage forms or enema compns. A clear viscous enema contained HPMC 50, methylparaben 2, propylparaben 0.4, and purified water 947.6 g.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:705275 HCAPLUS
DOCUMENT NUMBER: 130:144056
TITLE: Thermally reversible xyloglucan gels as vehicles for rectal drug delivery
AUTHOR(S): Miyazaki, Shozo; Suisha, Fumie; Kawasaki, Naoko; Shirakawa, Mayumi; Yamatoya, Kazuhiko; Attwood, David
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Health Science University of Hokkaido, Ishikari-Tohbetsu, Hokkaido, 061-02, Japan
SOURCE: Journal of Controlled Release (1998), 56(1-3), 75-83
CODEN: JCREEC; ISSN: 0168-3659
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The aim of this study was to investigate the potential application of thermo reversible gels formed by a xyloglucan **polysaccharide**

derived from tamarind seed for rectal drug delivery. Xyloglucan that had been partially degraded by β-galactosidase to eliminate 44% of galactose residues formed gels at concns. of between 1 to 2% weight/weight at gelation temps. decreasing over the range 27 to 22° with increasing concentration The in vitro release of indomethacin and diltiazem from the enzyme-degraded xyloglucan gels followed root-time kinetics over a period of 5 h at 37°; the diffusion coeffs. increasing with temperature increase between 10 and 37°. The in vitro release of indomethacin from the gels was significantly more sustained than from com. suppositories. Measurement of plasma levels of indomethacin after **rectal administration** to rabbits of the gels and com. suppositories containing an identical drug concentration indicated a broader absorption peak following administration of the gels, and a longer residence time. There was no significant difference in bioavailability of indomethacin when administered by these two vehicles. Morphol. studies of rectal mucosa following a single administration of the gels showed no evidence of tissue damage. The results of this study suggest the potential of the enzyme-degraded xyloglucan gels as vehicles for **rectal delivery** of drugs.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:264636 HCAPLUS
DOCUMENT NUMBER: 122:38692
TITLE: Modification of Rectal Absorption of Morphine from Hollow-Type Suppositories with a Combination of α-Cyclodextrin and Viscosity-Enhancing **Polysaccharide**
AUTHOR(S): Uekama, Kaneto; Kondo, Takashi; Nakamura, Kiyotomo; Irie, Tetsumi; Arakawa, Katsumasa; Shibuya, Masaoki; Tanaka, Joji
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Kumamoto University, Kumamoto, 862, Japan
SOURCE: Journal of Pharmaceutical Sciences (1995), 84(1), 15-20
CODEN: JPMSAE; ISSN: 0022-3549
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An attempt was made to optimize the **rectal delivery** of morphine, using cyclodextrins as an absorption enhancer and polysaccharides as a swelling hydrogel in Witepsol H-15 hollow-type suppositories, and this was tested in rabbits. α- And β-cyclodextrins enhanced the rate and extent of bioavailability, the former being more effective; γ-cyclodextrin decreased the absorption of morphine. The in-vitro membrane permeation studies using excised rectal sacs revealed that α-cyclodextrin enhanced the permeation of morphine through the rectal membranes. In contrast, viscous polysaccharides such as xanthan gum retarded the plasma morphine levels after the **rectal administration**, reflecting in-vitro show release characteristics. A combination of α-cyclodextrin and xanthan gum produced sustained plasma profiles of morphine along with an increased rectal bioavailability (more than 4 times). From the observation of the distribution behavior of suppositories in rabbit rectum and colon after the **rectal administration**, xanthan gum was found to prevent the upward spread of the drug. Gross and microscopic observations suggested that this preparation was less irritating to the rectal mucosa.

L6 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:491480 HCAPLUS
DOCUMENT NUMBER: 121:91480
TITLE: Optimized rectal absorption of morphine from

hollow-type suppository by cyclodextrins and viscosity-enhancing polysaccharides
AUTHOR(S): Arakawa, K.; Shibuya, M.; Tanaka, J.; Tobino, S.; Ikeda, K.; Kondo, T.; Nakamura, K.; Irie, T.; Uekama, K.
CORPORATE SOURCE: Res. Lab., Torii and Co. Ltd., Ichikawa, 272, Japan
SOURCE: Minutes Int. Symp. Cyclodextrins, 6th (1992), 551-4. Editor(s): Hedges, Allan R. Ed. Sante: Paris, Fr.
CODEN: 60BCAL
DOCUMENT TYPE: Conference
LANGUAGE: English
AB α-Cyclodextrin increased mucosal membrane permeability to morphine, and thus, enhanced the rate and extent of rectal bioavailability of the opioid from hollow-type oleaginous suppository in rabbits. Viscous polysaccharides such as xanthan gum sustained the plasma morphine levels after the **rectal administration** of morphine in suppository in rabbits, reflecting the in-vitro slow release characteristics. A combination of α-cyclodextrin as an absorption enhancer and xanthan gum as a swelling hydrogel realized a sustained plasma profile of morphine along with the increased rectal absorptivity of morphine.

L6 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1974:433914 HCAPLUS
DOCUMENT NUMBER: 81:33914
TITLE: Absorption of dextran **polysaccharide** by mucosa of the large intestine
AUTHOR(S): Maslakov, D. A.; Turevskii, A. A.; Lagodskii, Ya. V.; Shalanda, T. I.
CORPORATE SOURCE: Grodn. Med. Inst., Grodno, USSR
SOURCE: Doklady Akademii Nauk BSSR (1974), 18(1), 87-9
CODEN: DBLRAC; ISSN: 0002-354X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Dextran [9004-53-9] was detected in the mucosa of the large intestine within 8 hr after its **rectal administration** to rabbits or rats. The **polysaccharide**, in the form of round granules, was mainly found in the macrophages, capillaries, and connective tissue.

```
=> s L5 and L1
L7            0 L5 AND L1

=> s (L1 or L4) and L5
L8            9 (L1 OR L4) AND L5

=> s (L1 or L4) and xanthan gum
L9           14 (L1 OR L4) AND XANTHAN GUM

=> s (L1 or L4) and hydroxypropylmethylcellulose
L10           0 (L1 OR L4) AND HYDROXYPROPYLMETHYLCELLULOSE

=> s (L1 or L4) and hydroxypropyl methylcellulose
L11           4 (L1 OR L4) AND HYDROXYPROPYL METHYLCELLULOSE

=> d l9 1-14 ibib abs

L9   ANSWER 1 OF 14     MEDLINE on STN
ACCESSION NUMBER:   97002983     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 8850322
TITLE:              Combination effects of alpha-cyclodextrin and
                    xanthan gum on rectal absorption and
                    metabolism of morphine from hollow-type suppositories in
                    rabbits.
```

AUTHOR: Kondo T; Irie T; Uekama K
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Kumamoto University, Japan.
SOURCE: Biological & pharmaceutical bulletin, (1996 Feb) 19 (2) 280-6.
Journal code: 9311984. ISSN: 0918-6158.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199612
ENTRY DATE: Entered STN: 19970128
Last Updated on STN: 19970128
Entered Medline: 19961210

AB Pharmacokinetics of morphine and its glucuronides in plasma were studied after **rectal administration** of hollow-type oleaginous suppositories containing kneading mixtures of morphine hydrochloride, alpha-cyclodextrin, and/or **xanthan gum** in rabbits. In combination with **xanthan gum**, alpha-cyclodextrin reduced the first-pass metabolism of morphine in the rectal mucosa and by the liver and improved the apparent rectal bioavailability of the opioid about 4 fold. In vitro permeation studies using an isolated rectal mucosal preparation of rabbits revealed that alpha-cyclodextrin increased the transepithelial conductance and facilitated the transport of morphine through the rectal mucosa. Furthermore, alpha-cyclodextrin facilitated its own mucosal permeation and reduced the glucuronidation of morphine during the passage through the rectal mucosa, probably through restricting the formation of a catalytic complex of morphine with glucuronyltransferases, rather than because of the enzyme saturation. The present data suggest that alpha-cyclodextrin in combination with **xanthan gum** is particularly effective in improving the rectal bioavailability of morphine from hollow-type suppositories.

L9 ANSWER 2 OF 14 MEDLINE on STN
ACCESSION NUMBER: 95230506 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7714736
TITLE: Modification of rectal absorption of morphine from hollow-type suppositories with a combination of alpha-cyclodextrin and viscosity-enhancing polysaccharide.
AUTHOR: Uekama K; Kondo T; Nakamura K; Irie T; Arakawa K; Shibuya M; Tanaka J
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Kumamoto University, Japan.
SOURCE: Journal of pharmaceutical sciences, (1995 Jan) 84 (1) 15-20.
Journal code: 2985195R. ISSN: 0022-3549.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199505
ENTRY DATE: Entered STN: 19950524
Last Updated on STN: 19950524
Entered Medline: 19950518

AB An attempt was made to optimize the **rectal delivery** of morphine, using cyclodextrins as an absorption enhancer and polysaccharides as a swelling hydrogel in Witepsol H-15 hollow-type suppositories, and this was tested in rabbits. alpha- and beta-cyclodextrins enhanced the rate and extent of bioavailability, the former being more effective; gamma-cyclodextrin decreased the absorption of morphine. The in-vitro membrane permeation studies using excised rectal sacs revealed that alpha-cyclodextrin enhanced the permeation of morphine through the rectal membranes. In contrast, viscous polysaccharides such as **xanthan gum** retarded the

plasma morphine levels after the **rectal administration**, reflecting in-vitro slow release characteristics. A combination of alpha-cyclodextrin and **xanthan gum** produced sustained plasma profiles of morphine along with an increased rectal bioavailability (more than 4 times). From the observation of the distribution behavior of suppositories in rabbit rectum and colon after the **rectal administration**, **xanthan gum** was found to prevent the upward spread of the drug. Gross and microscopic observations suggested that this preparation was less irritating to the rectal mucosa.

L9 ANSWER 3 OF 14 MEDLINE on STN
ACCESSION NUMBER: 93364371 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8395281
TITLE: Investigation on rectal absorption of indomethacin from sustained-release hydrogel suppositories prepared with water-soluble dietary fibers, **xanthan gum** and locust bean gum.
AUTHOR: Watanabe K; Yakou S; Takayama K; Machida Y; Isowa K; Nagai T
CORPORATE SOURCE: Hospital Pharmacy, Tokyo Women's Medical College Daini Hospital, Japan.
SOURCE: Biological & pharmaceutical bulletin, (1993 Apr) 16 (4) 391-4.
Journal code: 9311984. ISSN: 0918-6158.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199309
ENTRY DATE: Entered STN: 19931015
Last Updated on STN: 19931015
Entered Medline: 19930927

AB Sustained-release hydrogel suppositories prepared with water-soluble dietary fibers, **xanthan gum** and locust bean gum, were evaluated as a vehicle for **rectal administration** of indomethacin (IMC) in rabbits. The drug plasma levels were compared with those after **rectal administration** of commercial suppositories. When the commercial suppositories were given to rabbits, the plasma concentration reached the maximum level at 30 min after administration followed by a quick reduction, while no sharp peak of plasma levels was seen with the hydrogel suppositories. In particular, the plasma levels observed with the hydrogel suppositories of 1% (w/v) gum concentration were sustained much longer than those after dosing with the commercial suppositories; the mean residence times had higher values without a decrease in the area under the plasma concentration vs. time curves. Histopathological study showed good biological safety of the hydrogel suppositories to the rectal mucosa. These results suggested that the IMC hydrogel suppositories prepared with **xanthan gum** and locust bean gum were a practical rectal preparation with prolonged action and reduced side effects.

L9 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:233808 HCAPLUS
DOCUMENT NUMBER: 130:272024
TITLE: Pharmaceutical composition for the treatment of inflammatory bowel diseases
INVENTOR(S): Sachetto, Jean-Pierre; Sandborn, William Jeffery; Tremaine, William John
PATENT ASSIGNEE(S): Medeva Europe Limited, UK
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9916454 | A1 | 19990408 | WO 1998-GB2899 | 19980925 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2304948 | AA | 19990408 | CA 1998-2304948 | 19980925 |
| AU 9891780 | A1 | 19990423 | AU 1998-91780 | 19980925 |
| AU 758501 | B2 | 20030320 | | |
| EP 1017404 | A1 | 20000712 | EP 1998-944115 | 19980925 |
| EP 1017404 | B1 | 20040623 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI | | | | |
| JP 2001517708 | T2 | 20011009 | JP 2000-513588 | 19980925 |
| AT 269710 | E | 20040715 | AT 1998-944115 | 19980925 |
| PRIORITY APPLN. INFO.: | | | GB 1997-20590 A | 19970926 |
| | | | GB 1997-25346 A | 19971128 |
| | | | WO 1998-GB2899 W | 19980925 |

AB A polysaccharide selected from **xanthan gum** and HPMC is used for the treatment or prophylaxis of inflammatory bowel disease, especially Crohn's disease, left-sided ulcerative colitis or pouchitis. The polysaccharide is delivered by enteric-coated dosage forms or enema compns. A clear viscous enema contained HPMC 50, methylparaben 2, propylparaben 0.4, and purified water 947.6 g.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:685356 HCAPLUS
DOCUMENT NUMBER: 125:309070
TITLE: Azathioprine compositions for colonic administration
INVENTOR(S): Sandborn, William J.
PATENT ASSIGNEE(S): Mayo Foundation for Medical Education and Research, USA
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9630021 | A1 | 19961003 | WO 1996-US3383 | 19960312 |
| W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI | | | | |
| RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML | | | | |
| US 5691343 | A | 19971125 | US 1995-413505 | 19950330 |
| CA 2216728 | AA | 19961003 | CA 1996-2216728 | 19960312 |
| AU 9654218 | A1 | 19961016 | AU 1996-54218 | 19960312 |
| AU 707168 | B2 | 19990701 | | |
| EP 817634 | A1 | 19980114 | EP 1996-911292 | 19960312 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI | | | | |
| CN 1179719 | A | 19980422 | CN 1996-192873 | 19960312 |

| | | | | | |
|---|---|---|---|---|---|
| JP 11502842 | T2 | 19990309 | JP 1996-529440 | | 19960312 |
| BR 9607964 | A | 19991130 | BR 1996-7964 | | 19960312 |
| CZ 290428 | B6 | 20020717 | CZ 1997-3092 | | 19960312 |
| NO 9704440 | A | 19970925 | NO 1997-4440 | | 19970925 |
| NO 2001002930 | A | 19970925 | NO 2001-2930 | | 20010613 |
| PRIORITY APPLN. INFO.: | | | US 1995-413505 | A | 19950330 |
| | | | WO 1996-US3383 | W | 19960312 |

AB A method is provided to treat inflammatory bowel disease by topically administering to the colon an effective amount of azathioprine (I) or a pharmaceutically acceptable salt thereof, preferably via formulations adapted for delayed-release oral or **rectal administration**. A hydrophilic rectal foam contained I 2.366, methylparaben 1.4, propylparaben 0.14, **xanthan gum** 2.0, soya lecithin 2, Carbomer 5, Polysorbate-80 10, Citral 0.25, purified water 948.4 g, butane q.s., and nitrogen q.s.

L9 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN

| | |
|---|---|
| ACCESSION NUMBER: | 1996:127306 HCAPLUS |
| DOCUMENT NUMBER: | 124:211801 |
| TITLE: | Combination effects of α-cyclodextrin and **xanthan gum** on rectal absorption and metabolism of morphine from hollow-type suppositories in rabbits |
| AUTHOR(S): | Kondo, Takashi; Irie, Tetsumi; Uekama, Kaneto |
| CORPORATE SOURCE: | Fac. Pharmaceutical Sciences, Kumamoto Univ., Kumamoto, 862, Japan |
| SOURCE: | Biological & Pharmaceutical Bulletin (1996), 19(2), 280-6<br>CODEN: BPBLEO; ISSN: 0918-6158 |
| PUBLISHER: | Pharmaceutical Society of Japan |
| DOCUMENT TYPE: | Journal |
| LANGUAGE: | English |

AB Pharmacokinetics of morphine and its glucuronides in plasma were studied after **rectal administration** of hollow-type oleaginous suppositories containing kneading mixts. of morphine hydrochloride, α-cyclodextrin, and/or **xanthan gum** in rabbits. In combination with **xanthan gum**, α-cyclodextrin reduced the first-pass metabolism of morphine in the rectal mucosa and by the liver and improved the apparent rectal bioavailability of the opioid about 4-fold. In vitro permeation studies using an isolated rectal mucosal preparation of rabbits revealed that α-cyclodextrin increased the transepithelial conductance and facilitated the transport of morphine through the rectal mucosa. Furthermore, α-cyclodextrin facilitated its own mucosal permeation and reduced the glucuronidation of morphine during the passage through the rectal mucosa, probably through restricting the formation of a catalytic complex of morphine with glucuronyltransferases, rather than because of the enzyme saturation α-Cyclodextrin in combination with **xanthan gum** is particularly effective in improving the rectal bioavailability of morphine from hollow-type suppositories.

L9 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN

| | |
|---|---|
| ACCESSION NUMBER: | 1996:77046 HCAPLUS |
| DOCUMENT NUMBER: | 124:185332 |
| TITLE: | Rectal absorption and mucosal irritation of rectal gels containing buprenorphine hydrochloride prepared with water-soluble dietary fibers, **xanthan gum** and locust bean gum |
| AUTHOR(S): | Watanabe, Kazunori; Yakou, Shigeru; Takayama, Kozo; Isowa, Koichi; Nagai, Tsuneji |
| CORPORATE SOURCE: | Hospital Pharmacy, Tokyo Women's Medical College Daini Hospital, Nishiogu 2-1-10, Arakawa-ku, Tokyo, 116, Japan |
| SOURCE: | Journal of Controlled Release (1996), 38(1), 29-37 |

CODEN: JCREEC; ISSN: 0168-3659
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Rectal gels prepared with water-soluble dietary fibers, **xanthan gum** and locust bean gum, were evaluated as a vehicle for the **rectal administration** of buprenorphine-HCl (BN-HCl) in rabbits. The maximum plasma concentration of buprenorphine (BN) gradually decreased with an increase in the gum concentration The values of the mean residence time (MRT0-2) increased with increasing gum concentration The absorption of BN from rectal gels containing 0.5, 1 and 2% gum compared with those based upon polyethylene glycol (PEG), was more rapid. In particular, the absorption of BN from rectal gels containing 1% gum was extremely fast without decreasing the areas under the plasma concentration vs. time curves. The bioavailabilities obtained in rabbits correlated well with the in vitro release rates determined using dialysis tubing. A histopathol. study revealed severe mucosal hyperemia, which was thought to be the main characteristic of rectal irritation induced by PEG-base suppositories. BN-HCl rectal gels prepared with **xanthan gum** and locust bean gum were practical rectal prepns. with rapid absorption and reduced side effects.

L9 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:43020 HCAPLUS
DOCUMENT NUMBER: 124:66662
TITLE: Tocopherol compositions for delivery of biologically active agents
INVENTOR(S): Sonne, Matte Rydahl
PATENT ASSIGNEE(S): A/S Dumex, Den.
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9531217 | A1 | 19951123 | WO 1995-EP1835 | 19950515 |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT | | | | |
| RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2189328 | AA | 19951123 | CA 1995-2189328 | 19950515 |
| CA 2189328 | C | 20030722 | | |
| AU 9526705 | A1 | 19951205 | AU 1995-26705 | 19950515 |
| AU 697540 | B2 | 19981008 | | |
| EP 762896 | A1 | 19970319 | EP 1995-921750 | 19950515 |
| EP 762896 | B1 | 20020904 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| AT 223232 | E | 20020915 | AT 1995-921750 | 19950515 |
| ES 2178674 | T3 | 20030101 | ES 1995-921750 | 19950515 |
| PT 762896 | T | 20030131 | PT 1995-921750 | 19950515 |
| NO 9604832 | A | 19970113 | NO 1996-4832 | 19961114 |
| FI 9604583 | A | 19961115 | FI 1996-4583 | 19961115 |
| US 6193985 | B1 | 20010227 | US 1997-856054 | 19970514 |
| PRIORITY APPLN. INFO.: | | | GB 1994-9778 A | 19940516 |
| | | | WO 1995-EP1835 W | 19950515 |
| | | | US 1995-441759 B1 | 19950516 |

AB The present invention provides the use of a tocopherol or a derivative thereof as a solvent and/or emulsifier for substantially insol. and sparingly soluble biol. active agents, especially in the manufacture of pharmaceutical compns. Such compns. are particularly suitable for transmucosal, and especially intranasal or **rectal administration**, or administration via the oral cavity. An oil-in-water emulsion as a nose drop comprised an oil phase containing diazepam 5, α-tocopherol 59, and vitamin E TPGS 5g and a water phase containing di-Na edetate 0.05, K sorbate 0.20, **xanthan gum** 0.025, and purified water to 100g.

L9 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:264636 HCAPLUS
DOCUMENT NUMBER: 122:38692
TITLE: Modification of Rectal Absorption of Morphine from Hollow-Type Suppositories with a Combination of α-Cyclodextrin and Viscosity-Enhancing Polysaccharide
AUTHOR(S): Uekama, Kaneto; Kondo, Takashi; Nakamura, Kiyotomo; Irie, Tetsumi; Arakawa, Katsumasa; Shibuya, Masaoki; Tanaka, Joji
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Kumamoto University, Kumamoto, 862, Japan
SOURCE: Journal of Pharmaceutical Sciences (1995), 84(1), 15-20
CODEN: JPMSAE; ISSN: 0022-3549
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An attempt was made to optimize the **rectal delivery** of morphine, using cyclodextrins as an absorption enhancer and polysaccharides as a swelling hydrogel in Witepsol H-15 hollow-type suppositories, and this was tested in rabbits. α- And β-cyclodextrins enhanced the rate and extent of bioavailability, the former being more effective; γ-cyclodextrin decreased the absorption of morphine. The in-vitro membrane permeation studies using excised rectal sacs revealed that α-cyclodextrin enhanced the permeation of morphine through the rectal membranes. In contrast, viscous polysaccharides such as **xanthan gum** retarded the plasma morphine levels after the **rectal administration**, reflecting in-vitro show release characteristics. A combination of α-cyclodextrin and **xanthan gum** produced sustained plasma profiles of morphine along with an increased rectal bioavailability (more than 4 times). From the observation of the distribution behavior of suppositories in rabbit rectum and colon after the **rectal administration**, **xanthan gum** was found to prevent the upward spread of the drug. Gross and microscopic observations suggested that this preparation was less irritating to the rectal mucosa.

L9 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:491480 HCAPLUS
DOCUMENT NUMBER: 121:91480
TITLE: Optimized rectal absorption of morphine from hollow-type suppository by cyclodextrins and viscosity-enhancing polysaccharides
AUTHOR(S): Arakawa, K.; Shibuya, M.; Tanaka, J.; Tobino, S.; Ikeda, K.; Kondo, T.; Nakamura, K.; Irie, T.; Uekama, K.
CORPORATE SOURCE: Res. Lab., Torii and Co. Ltd., Ichikawa, 272, Japan
SOURCE: Minutes Int. Symp. Cyclodextrins, 6th (1992), 551-4.
Editor(s): Hedges, Allan R. Ed. Sante: Paris, Fr.
CODEN: 60BCAL

DOCUMENT TYPE: Conference
LANGUAGE: English
AB α-Cyclodextrin increased mucosal membrane permeability to morphine, and thus, enhanced the rate and extent of rectal bioavailability of the opioid from hollow-type oleaginous suppository in rabbits. Viscous polysaccharides such as **xanthan gum** sustained the plasma morphine levels after the **rectal administration** of morphine in suppository in rabbits, reflecting the in-vitro slow release characteristics. A combination of α-cyclodextrin as an absorption enhancer and **xanthan gum** as a swelling hydrogel realized a sustained plasma profile of morphine along with the increased rectal absorptivity of morphine.

L9 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:525051 HCAPLUS
DOCUMENT NUMBER: 119:125051
TITLE: Investigation on rectal absorption of indomethacin from sustained-release hydrogel suppositories prepared with water-soluble dietary fibers, **xanthan gum** and locust bean gum
AUTHOR(S): Watanabe, Kazunori; Yakou, Shigeru; Takayama, Kozo; Machida, Yoshiharu; Isowa, Koichi; Nagai, Tsuneji
CORPORATE SOURCE: Hosp. Pharm., Tokyo Women's Med. Coll., Tokyo, 116, Japan
SOURCE: Biological & Pharmaceutical Bulletin (1993), 16(4), 391-4
CODEN: BPBLEO; ISSN: 0918-6158
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Sustained-release hydrogel suppositories prepared with water-soluble dietary fibers, **xanthan gum** and locust bean gum, were evaluated as a vehicle for **rectal administration** of indomethacin (IMC) in rabbits. The drug plasma levels were compared with those after **rectal administration** of com. suppositories. When the com. suppositories were given to rabbits, the plasma concentration reached the maximum level at 30 min after administration followed by a quick reduction, while no sharp peak of plasma levels was seen with the hydrogel suppositories. In particular, the plasma levels observed with the hydrogel suppositories of 1% (weight/volume) gum concentration were sustained much longer than those after dosing with the com. suppositories; the mean residence times had higher values without a decrease in the area under the plasma concentration vs. time curves. Histopathol. study showed good biol. safety of the hydrogel suppositories to the rectal mucosa. These results suggested that the IMC hydrogel suppositories prepared with **xanthan gum** and locust bean gum were a practical rectal preparation with prolonged action and reduced side effects.

L9 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:221595 HCAPLUS
DOCUMENT NUMBER: 116:221595
TITLE: Sustained-release morphine preparation for **rectal administration**
INVENTOR(S): Uekama, Kaneto
PATENT ASSIGNEE(S): Torii and Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| EP 476205 | A1 | 19920325 | EP 1990-313718 | | 19901214 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | | |
| JP 04134030 | A2 | 19920507 | JP 1990-253134 | | 19900921 |
| JP 3001242 | B2 | 20000124 | | | |
| CA 2030039 | AA | 19920322 | CA 1990-2030039 | | 19901115 |

PRIORITY APPLN. INFO.: JP 1990-253134 A 19900921

AB A sustained-release hollow type suppository for **rectal administration** comprises a mixture of morphine (I), α-cyclodextrin (II) and a thickener. A hollow type suppository containing I·HCl was prepared using Witespol H-15 base and was filled with 205 mg mixture of I·HCl, II, and **xanthan gum** . A sustained-release action of suppositories was shown in rabbits.

L9 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:158938 HCAPLUS
DOCUMENT NUMBER: 116:158938
TITLE: Mesalazine or other compound-containing pharmaceutical compositions for **rectal administration**
INVENTOR(S): Frigerio, Giuliano; Brunetti, Gabriele; Giorgetti, Enzo; Chiodini, Emilia
PATENT ASSIGNEE(S): Giuliani S.p.A., Italy
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 468555 | A1 | 19920129 | EP 1991-201485 | 19910614 |
| EP 468555 | B1 | 19961227 | | |
| EP 468555 | B2 | 20010207 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, LI, LU, NL, SE | | | | |
| CA 2044676 | AA | 19920128 | CA 1991-2044676 | 19910614 |
| CA 2044676 | C | 20030401 | | |
| AT 146674 | E | 19970115 | AT 1991-201485 | 19910614 |
| ES 2097787 | T3 | 19970416 | ES 1991-201485 | 19910614 |
| JP 04234315 | A2 | 19920824 | JP 1991-180599 | 19910626 |
| JP 3291301 | B2 | 20020610 | | |
| GR 3035634 | T3 | 20010629 | GR 2001-400479 | 20010323 |

PRIORITY APPLN. INFO.: IT 1990-21104 A 19900727

AB An active agent, such as an anti-inflammatory, an antibiotic, and a laxative, is formulated in a fluid vehicle to generate a foam on **rectal administration** and to exhibit a topical medication action at the colon level. Thus, a rectal foam contained mesalazine 10, **xanthan gum** 0.2, K2S2O5 0.25, di-Na EDTA 0.3, Na benzoate 0.38, polysorbate-20 4, polyoxyethylene isostearate 4, purified water 70.87, Freon 12 6.5, and Freon 114 3.5 %.

L9 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1982:533593 HCAPLUS
DOCUMENT NUMBER: 97:133593
TITLE: Pharmaceutical compositions containing guaiacol or its derivatives
INVENTOR(S): Rhodes, John; Evans, Brian Kenneth; Heatley, Richard Val
PATENT ASSIGNEE(S): Geistlich, Ed., Soehne A.-G. fuer Chemische Industrie, Switz.
SOURCE: Brit. UK Pat. Appl., 4 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| GB 2090134 | A | 19820707 | GB 1980-41467 | 19801230 |
| PRIORITY APPLN. INFO.: | | | GB 1980-41467 | 19801230 |

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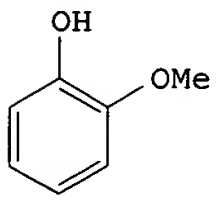

I

AB Pharmaceuticals for treatment of heartburn by oral administration or treatment of constipation of the large bowel by **rectal administration** comprise guaiacol (I) [90-05-1] (15-100 mg/dose) or its derivs., and a mucilage and(or) a silicone antifoam or suppository mass, and optionally alkaline compds. for neutralizing gastric acids. Thus, an aqueous preparation contained I 0.1, alkaline compound [Mg(OH)2 + Al(OH)2] 8, **xanthan gum** 0.8, preservative 0.15, and citric acid 1.0 g, sweetener 10 and H2O to 100 mL.

=> d l11 1-4 ibib abs

L11 ANSWER 1 OF 4 MEDLINE on STN
ACCESSION NUMBER: 2003472782 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12969093
TITLE: No volume effect on retrograde colonic spread of rectally-administered ropivacaine gel.
AUTHOR: Arlander E; Cederlund T; Mare K
CORPORATE SOURCE: Experimental Medicine, AstraZeneca R&D, Sodertalje,. Sweden.eva-arlander@astrazeneca.com
SOURCE: Alimentary pharmacology & therapeutics, (2003 Sep 15) 18 (6) 655-60.
Journal code: 8707234. ISSN: 0269-2813.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200311
ENTRY DATE: Entered STN: 20031011
Last Updated on STN: 20031107
Entered Medline: 20031106

AB BACKGROUND: **Rectal administration** of enemas, foams and suppositories is the most efficient way to deliver locally acting drugs to the distal colon. Ropivacaine, a long-acting local anaesthetic, was chosen as a candidate for a new rectal treatment of ulcerative colitis. AIM: To determine the colonic spread of a rectal ropivacaine formulation. METHODS: In this randomized, incomplete cross-over study, 12 male volunteers were given 200 mg ropivacaine HCl rectally in 20, 40, 60 and 80 mL **hydroxypropyl methylcellulose** gel. The viscosity of the gel was 1.1 Pa s. The spread of the radiolabelled (99mTc-labelled diethylenetriaminepenta-acetic acid) formulations was assessed by gamma-scintigraphy. Plasma was collected and analysed for ropivacaine

base. RESULTS: The retrograde spread was limited to the descending colon and the difference between the studied volumes was not statistically significant. Only the 80-mL volume tended to have a larger distribution, although the 20-mL volume showed the same maximal distribution in two subjects. No distinct relationship between volume, retrograde colonic spread and plasma concentrations could be found. Ropivacaine was well tolerated. CONCLUSIONS: Rectal ropivacaine gel in all volumes between 20 and 80 mL can spread up to the descending colon. There was no relationship between either retrograde colonic spread or the administered volume and the ropivacaine plasma concentrations.

L11 ANSWER 2 OF 4 MEDLINE on STN
ACCESSION NUMBER: 2002296481 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12036724
TITLE: Bioavailability and in vitro oesophageal sticking tendency of **hydroxypropyl methylcellulose** capsule formulations and corresponding gelatine capsule formulations.
COMMENT: Erratum in: Eur J Pharm Sci 2002 Oct;17(1-2):105. Pia, Laaksonen [corrected to Laaksonen, Pia]; Janne, Marvola [corrected to Marvola, Janne]; Raimo, Tuominen [corrected to Tuominen, Raimo]; Sari, Eerikainen [corrected to Eerikainen, Sari]; Martti, Marvola [corrected to Marvola, Martti]
AUTHOR: Honkanen Outi; Laaksonen Pia; Marvola Janne; Eerikainen Sari; Tuominen Raimo; Marvola Martti; Pia Laaksonen; Janne Marvola; Sari Eerikainen; Raimo Tuominen; Martti Marvola
CORPORATE SOURCE: Department of Pharmacy, University of Helsinki, P.O. Box 56, Finland.. outi.honkanen@helsinki.fi
SOURCE: European journal of pharmaceutical sciences : official journal of the European Federation for Pharmaceutical Sciences, (2002 Jun) 15 (5) 479-88.
Journal code: 9317982. ISSN: 0928-0987.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200212
ENTRY DATE: Entered STN: 20020531
Last Updated on STN: 20030110
Entered Medline: 20021231

AB The overall aim of the present study was to widen our knowledge about the biopharmaceutical behaviour of novel **hydroxypropyl methylcellulose** (HPMC)-based two-piece capsules by comparing them with the classic hard gelatine capsules. Firstly, the tendency of the HPMC capsules to stick to isolated porcine oesophageal preparation was evaluated. The force needed to detach the HPMC capsules from the oesophagus was significantly lower than that for the gelatine capsules ($P<0.001$), which is evidently an advantage of this new dosage form. The second aim was to investigate the possibility of preparing sustained-release capsules using different powdered HPMCs as diluents (K100, K4M and K15M) and the effect of the molecular weight of HPMC powder on the in vitro and in vivo behaviour of the capsules. In addition to peroral drug administration also rectal dosing was applied. Two groups of eight healthy volunteers participated in randomised, cross-over, single-dose studies. One group was administered capsules orally and the other rectally. There were no marked differences in the bioavailability properties of either the oral or rectal HPMC capsules containing ibuprofen as model drug as compared with corresponding gelatine capsule formulations. Using different viscosity grades of HPMC powders as diluents it was possible to control the absorption rate of the model drug both from gelatine and HPMC capsules as far as the oral route was

concerned. After **rectal administration** there were no statistically significant differences between the formulations containing different grades of HPMC powder. Only partial correlation was observed between the results of the bioavailability studies and the in vitro dissolution studies. From a biopharmaceutical point of view these two shell materials can be regarded as interchangeable.

L11 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:864700 HCAPLUS
DOCUMENT NUMBER: 140:210372
TITLE: No volume effect on retrograde colonic spread of rectally-administered ropivacaine gel
AUTHOR(S): Arlander, E.; Cederlund, T.; Mare, K.
CORPORATE SOURCE: Experimental Medicine, AstraZeneca R+D, Soedertaelje, Swed.
SOURCE: Alimentary Pharmacology and Therapeutics (2003), 18(6), 655-660
CODEN: APTHEN; ISSN: 0269-2813
PUBLISHER: Blackwell Publishing Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Background: **Rectal administration** of enemas, foams and suppositories is the most efficient way to deliver locally acting drugs to the distal colon. Ropivacaine, a long-acting local anesthetic, was chosen as a candidate for a new rectal treatment of ulcerative colitis. Aim: To determine the colonic spread of a rectal ropivacaine formulation. Methods: In this randomized, incomplete cross-over study, 12 male volunteers were given 200 mg ropivacaine HCL rectally in 20, 40, 60 and 80 mL **hydroxypropyl methylcellulose** gel. The viscosity of the gel was 1.1 Pa s. The spread of the radiolabeled (99mTc-labeled diethylenetriaminepenta-acetic acid) formulations was assessed by gamma-scintigraphy. Plasma was collected and analyzed for ropivacaine base. Results: The retrograde spread was limited to the descending colon and the difference between the studied vols. was not statistically significant. Only the 80-mL volume tended to have a larger distribution, although the 20-mL volume showed the same maximal distribution in two subjects. No distinct relationship between volume, retrograde colonic spread and plasma concns. could be found. Ropivacaine was well tolerated. Conclusions: Rectal ropivacaine gel in all vols. between 20 and 80 mL can spread up to the descending colon. There was no relationship between either retrograde colonic spread or the administered volume and the ropivacaine plasma concns.
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:364645 HCAPLUS
DOCUMENT NUMBER: 127:39669
TITLE: Use of a hard gelatin capsule as a rectal dosage form
AUTHOR(S): Eerikainen, S.; Leino, J.; Harjula, M.; Klinge, E.; Marvola, M.
CORPORATE SOURCE: University Pharmacy, Helsinki, 00510, Finland
SOURCE: S.T.P. Pharma Sciences (1996), 6(6), 435-440
CODEN: STSSE5; ISSN: 1157-1489
PUBLISHER: Editions de Sante
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The aim of the present study was to determine, using ibuprofen as a model drug, whether hard gelatin capsules were of value as rectal dosage forms in man. The effects of training in administration of the capsules and use of liquid paraffin as a glidant were also studied. The influences of different diluents in the capsule, i.e., lactose, dicalcium phosphate and **hydroxypropyl methylcellulose**, on the bioavailability of ibuprofen were determined The results showed that ibuprofen is adequately

absorbed after **rectal administration** via hard gelatin capsules. Training in administration and use of a glidant to facilitate **rectal administration** nonetheless played an important role. The type of diluent used markedly affected bioavailability. Capsules containing lactose behaved like immediate release formulations. Those containing hydroxypropyl Me cellulose behaved like prolonged release products.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT